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PSYCHOLOGICAL LITERATURE.

Essays Philosophical and Psychological: in Honor of William James. By his Colleagues at Columbia University. New York, Longmans, Green & Co., 1908. pp. viii, 610.

This handsomely appointed volume—generous in bulk, but refreshingly light in the hand—contains a series of nineteen essays, classified by the editors as philosophical and psychological, which have been written in honor of Professor James and pragmatism by present or recent members of the Departments of Philosophy and Psychology at Columbia University. An excellent portrait of Pro-

fessor James serves as frontispiece.

The philosophical essays, which we can here only enumerate, are as follows: "The New Realism," by G. S. Fullerton; "Does Reality Possess Practical Character?" by J. Dewey; "A Factor in the Genesis of Idealism," by W. T. Bush; "Consciousness a Form of Energy," by W. P. Montague; "Perception and Epistemology," by F. J. E. Woodbridge; "Substitutionalism," by C. A. Strong; "World-Pictures," by W. B. Pitkin; "Naïve Realism: What Is It?" by D. S. Miller; "Kant and the English Platonists," by A. O. Lovejoy; "A Critique of Kant's Ethics," by F. Adler (reprinted from Mind, April, 1902); "The Abuse of Abstraction in Ethics," by H. G. Lord; "Purposive Consistency, the Outline of a Classification of Values," by G. A. Tawney; "The Problem of Method in Mathematics and Philosophy," by H. C. Brown. As will be seen from the titles, and as appears from the contents, these papers have fully as much to do with metapsychology as with metaphysics: a natural and fitting state of affairs, in view of the purpose of the book. As is also natural, seeing that (with the one exception noted above) they have been prepared in the course of a single year, the essays are of very various degrees of merit, ranging from the occasional contribution to systematic and historical investigation of permanent value.

The first of the psychological essays, by K. Gordon, deals with "Pragmatism in Æsthetics." Pragmatism is the disposition to look for final explanations in terms of purpose, and for reality in experienced satisfactions. Approaching æsthetics from this point of view, Miss Gordon finds that the motive of the artist is to "impose his experience on others," "to establish and preserve whatever novel emotions or supreme moments his experience may have held." "The work of the artist is to objectify new or striking emotions;" "there is always a social reference in this desire for expression." Passing from artist to admirer of art, she discovers "the characteristics of the æsthetic consciousness" in "a remoteness from immediate self interests, a suggestible and imitative attitude towards the object, and an allegiance to a reality felt to be independent of oneself." Behind all this, the keynote to the consciousness both of artist and of observer is "an instinct for excitement, a curiosity about the untried, and a liking for whatever is novel and stirring." Finally, the art-product has to be explained, as middle term between producer and admirer. Individually, emotion arises from conflict of impulses; "the objectification of emotion is an objectification of conflict, and whoever preserves an emotion preserves an ungratified impulse, a problem unsolved or a

purpose unfulfilled." Socially, the function of art is originally instrumental, "not so much a stilling as a prodding of the will." Modern art is also instrumental, only that it stimulates not to a specific but to a generic act, "and leaves each individual to live out for himself the meaning and the end of it." The term 'disinterestedness' is misleading; only some interests, by no means all, are in abeyance in æsthetic contemplation. The æsthetic moment derives its value from a purpose, and is not literally 'free from desire.' The feeling of freedom derives from the nature of emotion, as representing a choice of possible action. Art, in a word, "preserves and presents meanings at their emotional stage, before they have become explicit, definite, or solved." As stimulative and instrumental, it is "prior to that which it effects. Life and nature are in a vital sense experienced as products of art."

We have given the above summary so far as possible in the author's own words, because the paper is merely an outline sketch of a comprehensive theory. How stable that theory would prove to be, if fully worked out, we do not know. Obvious points of criticism are: the total neglect of the technical motive in æsthetic production; the psychological account of such an emotion as anger as a 'conflict of impulses'; the over-direct passage from genesis to analysis, from the question of origins to the function of art in modern society; the extreme poverty and the personally motived selection of the illustrations; and the casual and, so to say, contextless reference to other theories. It is only fair to add that some of these defects are rendered inevitable by the limits of the paper. Others, however, are not.

inevitable by the limits of the paper. Others, however, are not.

The next paper, by R. S. Woodworth, on "The Consciousness of Relation," falls into line with a fairly long series of recent psychological investigations, a series that extends from Marbe and Ach to Bühler. It deals with one phase of a problem which appears elsewhere as that of the 'general attributes of sensation' (Ebbinghaus), of Bewusstheit, Bewusstseinslage, Gedankenelement, or again, in other connections, as that of Gestaltqualität, Bekanntheitsqualität, Wirkungs-Professor Woodworth makes no reference to previous akzent, etc. wrokers at this and at cognate problems, even in a footnote. His thesis is, in general, that there are, "in thinking, moments bare of recognizable imagery, containing no sensations of interest - moments, nevertheless, of mental alertness and of keen consciousness," and that "it is ultra-parsimonious for the psychologist to try to keep house without these facts." More particularly, he argues for the existence and the qualitative simplicity of 'feelings of relationship,'quoting here James's "Stream of Thought," but not quoting Herbert Spencer or Schrader. The logical bifurcation of a relation presents no difficulty either to psychology or to brain physiology. Logical complication is not paralleled by introspective complexity: "a relation may be of any order or power, and still have in consciousness a felt quality which is equally simple." Relations are, in reality, no more 'private' or incommunicable than are sensory qualities. While, however, all science deals with relations, and these or the adjustments to them carry thought forward, "the utility of the feelings of relation is by no means evident." Still, we cannot either say what is the utility of the particular sense-qualities; so that the aporia is, at least, old and familiar.

In comment upon this position, it may be remarked that there will always be, in a growing science, two types of workers, those who prefer to work within fields and by methods that have already proved fruitful, and those who are impatient of restriction and tend naturally to the unexplored and undiscussed. The besetting sin of the former is

overhasty and overstrict systematization. The besetting sin of the latter is incomplete and loose-ended observation, and consequent unfounded generalization. Each type must keep critical watch upon the other, but each must also try to sympathize with the other's point of view. There is, now, no doubt as to the facts to which Professor Woodworth and psychologists of his kidney appeal; the question at issue is a question of interpretation. Is 'imageless thought,' Bewusstseinslage, a complex of residua of images of the higher senses, of organic nascencies, of verbal short-cuts, of psychophysical sets and dispositions,—or are we in presence of what Titchener would call a structural element of consciousness? Very similar questions are to be met with in the current psychology of feeling; and there, as here, positive answer is impossible. Conservatism, however, would seem to be indicated. Let us remember, for example, how insistently the moralists have urged that conscience is a unique and irreducible mental phenomenon, and how successfully psychology has held out against the claim. Let us remember that every content of consciousness is, in a certain sense, unique and simple; my idea of the cosmos is, in a way, as unanalyzable as Professor Woodworth's 'sky-scraper' of piled relations. As reproductive unit, as vehicle of a single meaning, every idea is thus simple. Let us remember, too, the errors into which the psychologists of associationism were led by their translation of unitary reproductive function into structural simplicity. And let us remember, finally, that the establishment of a novel element of mind must be a matter of extreme methodical care, and that 'rule of three' introspections-valuable enough in themselves, as roughly mapping out the territory to be explored—cannot at all be considered as demonstrative. The fields of belief, of desire, of imagination, of volition, of thought have as yet been very inadequately surveyed by experimental means. Pioneer work is necessary and welcome; but the pioneer results must be taken for what they are, gross and tentative only; to set them by the side of verified analytical data would be illogical, as well as historically unjustifiable. Grateful for the discoveries made, we must suspend judgment upon their ultimate character. As to Professor Woodworth's appeal to cerebral physiology, that seems to us to lead nowhere. We know so little of the psychophysical processes that all sorts of constructions are possible, and all must remain unconvincing.

The next two papers, those on the Variability of Individual Judgment by F. L. Wells and on the Validity of Judgments of Character by N. Norsworthy, are of a statistical character. Dr. Wells has studied "the variability in three classes of judgment; first, the highly subjective feeling of preference for different sorts of pictures [we may interject here that Dr. Wells is not the psychological discoverer of the souvenir postal card]; second, the more objective judgment of color differences, and, finally, a type of judgment whose accuracy could be readily measured by objective means. It has appeared that in the first class the judgments of each individual cluster about a mean which is true for that individual only, and which varies from that of any other individual more than twice as much as its own judgments vary from it; that in the second class, with the colors, the variability of the successive judgments and those by different individuals markedly approached each other, but still preserved a significant difference; while in the third class, with the weights, we found that there might be even an excess of the individual variability over the 'social.' This comparison seems to afford, to a certain extent, a quantitative criterion of the subjective." Further, there appears in objective fields a phenomenon of individual tendency, of 'sensation habit,' which needs further and special investigation. Miss Norsworthy shows first that, given impartiality of the group of judges (to be attained, practically, by random selection among the competent and trained), judgments of character have objective validity. More than that, the order of excellence in the various traits estimated is, within wide limits, reliable. These results suggest the question whether the ability to judge character is itself a measurable power; the answer is, roughly, in the affirmative. The author finds, also, that there are persons about whose character there is much greater difference of opinion than is the case with others, and that, similarly, there are traits about which there is less agreement than is the case with others. Unfortunately, there is most divergence (among the traits examined) in the judgments of integrity, kindliness and refinement,—the very points upon which emphasis is laid in the employment-blanks of the educational agencies.

The fifth essay, by J. McK. Cattell, is entitled "Reactions and Perceptions." Professor Cattell argues that the 'force and liveliness' of the perception as compared with the image or idea depend upon the greater prevalence and definiteness of the motor elements. 'Images and perceptions are equally the result of brain changes, which are themselves part of the world's material system. But the brain changes which are excited from within are less likely to result in motor discharges than those which form parts of sensori-motor arcs. This is necessary if the organism is to survive and prosper." In general, "the character and validity of our perceptions are prescribed by the motor responses no less than by the incoming currents." responses may be inhibitions, which "are as integral parts of the motor processes as discharges;" "consciousness is related to inhibition in a peculiarly intimate fashion." Sight and kinæsthesis are mainly responsible for our material and spatial world. In sight, the movements of eyes, head and body are of extreme importance. In kinæsthesis it is difficult to distinguish between image and actual movement or partial inhibition of movement. This difficulty of discrimination supports the view that in vision and audition it is the motor element that differentiates perception from idea. As "the incoming currents and the discharges which lead to definite muscular reactions give reality to the perceptions", so "the incoming currents and the discharges to the inner organs with the vaguer muscular contractions give rise to the emotions." Images and perceptions are confused only when the motor reactions are confused, when they are inhibited or are excessive.

It is not quite easy to follow Professor Cattell's argument in detail. The difference between image and perception seems, on the whole, to be a matter only of degree; the "more pronounced motor elements" in perception correspond to a "superior" vividness. But, if this is the case, why is it "only a mad cat that may jump at an imaginary mouse?" Why should not a perfectly sane cat jump a little way towards the imaginary mouse, and jump all the way towards a seen mouse? The cat appears to find a difference in kind, even in Professor Cattell's pages; for the muscular tension that it shows while watching for its prey is explicitly referred to "the vivid perception of the approaching mouse." (For 'approaching mouse' we may here probably read 'mouse-hole' or 'smell of mouse'.) And there is another difficulty. Incoming currents are said to "arouse the suitable responses." And centrally excited processes cannot excite the same responses as peripherally excited, since "in that case the animal would not survive." This, however, is a teleological, not a causal argument. How does the hitching-on of the suitable responses take place? If, as Pro-

fessor Cattell implies, the image and the perception would be identical but for the difference in motor elements, the incoming processes must be transferred to motor paths from the same sensory centre. How does this centre discriminate the centrally from the peripherally aroused excitations? Not, of course, by any psychological equivalent of their vividness, for the difference of vividness is produced by the difference of motor elements: how then? Professor Cattell's theory can hardly be regarded as complete until an answer to this question is forthcoming. Apart, however, from these and other points of detail, the importance of the paper appears to lie in the writer's modification of the dynamogenic theory of consciousness. If he does not deny outright the statement that "all consciousness is motor," he at least makes the image-consciousness so little motor that motor reactions of the ordinary type render it abnormal, and its bearer incapable of survival. This is welcome recognition of the restricted sphere of the motor element in the mental life, and of the modest place that is accordingly to be assigned to it in psychological theory.

The concluding essay of the volume, by E. L. Thorndike, proposes a Pragmatic Substitute for Free Will. Professor James has said that the only issue of consequence in the free-will controversy is meliorism, for which indeterminism gives possibility. Professor Thorndike seeks to show that the "natural constitution of the world makes meliorism possible and, in fact, necessary." While compatible with indeterminism, meliorism is also compatible with, and even assured by, a scien-

tific determinism.

The first and most essential part of the argument is the proof that "the behavior of a man to the same situation becomes, as a rule, more and more productive of the satisfying and less of the discomforting as the situation recurs." Ordinarily, this proposition is taken for granted. The physiological mechanism is, however, not easy to understand; and as the whole fate of scientific meliorism hinges on it (the success of individual men implying, as will be later shown, an increase in satisfaction for the whole contemporaneous group), the author works out a hypothetical mechanism, in terms of the neurone theory. This he illustrates by reference to concrete cases, and compares with the simpler mechanism proposed by Jennings. He then passes to the second stage of the argument: the proof that "behavior in favor of the satisfying to an individual leads to meliorism for the species." The lines of proof are two: "behavior not only changes itself for the better for the same situation, but also changes the situations themselves for the better for the same organism;" and, on the whole, what satisfies temporarily is satisfying for the individual's entire after-life,-temporary satisfaction being further regulated by the prescience of intellect. On both counts, the individual's gain through behavior involves no counterbalancing loss to the species. For what is good for him, as a total life, is more often than not good for the species; and, in addition, the species itself has power to weight the satisfyingness of affairs. "When behavior arises which, besides satisfying the individual, adds to the sum of satisfaction of the group, it is almost inevitably selected for survival;" care of offspring, for instance, or good will to fellows of the same species, or industry, or inintellectual curiosity and its sequents, scientific investigation and invention, or the sense of justice. "Each succeeding generation's happiness is protected"—not perfectly, rather in a restricted, handto-mouth way; but still protected - by these modes of behavior; "and the future generation is always there to protect itself." This meliorism is intelligible; if restricted, it is a doctrine of surety; it is independent of any theory of the interrelation of mind and body; it

applies to thought as well as to conduct; it is matter of observed scientific fact. "To assert that, so far as man's own behavior goes he betters himself, is the same variety of judgment as to say that so far as the behavior of the population of Russia goes it increases itself."

The latter portion of the essay appears to us to contain little more than the generalizations natural to a writer of optimistic temperament. The nerve of Professor Thorndike's contribution lies in his attempt os substitute a workable physiological mechanism, an interplay of cause and effect, for the facile teleology of Spencer and his followers. That the mechanism is hypothetical is no objection; so far as our knowledge goes the nervous system may very well, as the author says, "be so constituted as to produce increasingly those neural arrangements which possess satisfyingness;" and no one can do more than guess at what really happens within it. The present guess was distinctly worth making, and might profitably be worked out in greater detail,—as, perhaps, it will be if Professor Thorndike's promised critique of Jennings evokes a reply. The doubt that remains is the doubt that lies behind his whole "interpretation of human and animal behavior;" the doubt of meliorism itself.

It is with regret that we note the omission of Professor Hyslop's name from the list of contributors to the volume. While, on formal grounds, Professor Hyslop would naturally be excluded from participation, his recent connection with Columbia University, and his sustained interest in matters of which Professor James is also a devoted student, suggest that a paper from his pen would have been especially welcome to the eminent psychologist and philosopher to whom the essays are dedicated.

P. E. WINTER.

Die biologische Theorie der Lust und Unlust, von Dr. D. C. NADEJDE. Heft I. Leipzig, W. Engelmann, 1908. pp. viii, 99.

This work represents, so far as the reviewer knows, the first serious attempt to grapple critically with the teleological—or, as the writer prefers to term it, the biological—theory of pleasure-pain. Brief critical discussions may, it is true, be found in Wundt's Physiologische Psychologie, in Külpe's Grundriss, and in Ribot's Psychologie des sentiments; still briefer in Ziegler's Das Gefühl and in Stumpf's recent paper on Gefühlsempfindungen; and a careful search would, no doubt, add to the list. On the whole, however, the adherents of the theory, from Aristotle down to Spencer and Lehmann, have had things very much their own way. Physiological psychology has been content to remark that the rule of correlation, of pleasure with the useful and pain with the harmful, has salieut exceptions, or that science may not lay too great stress upon a teleological maxim; it has made its formal reserves, and has then allowed the correlation to stand. A typical treatment of this sort is given, for example, in Ebbinghaus's Grundzüge. Such an attitude is no longer possible; all future students of the psychology of feeling must take account of Dr. Nadeide's work.

The work itself is, unfortunately, neither easy to read nor easy to review. The writer confesses, in the preface, to a certain difficulty in the use of German, and this difficulty may account for the somewhat cramped style, and the tendency to string together paragraphs whose logical connection is not always clear. Every one knows that the free and correct use of connectives is one of the supreme tests of a mastery of the German language; but we do not always realize how obscure a piece of otherwise straightforward reasoning may become if the connectives are omitted or their finer shades neglected. And the reviewer meets these further difficulties: that the critical portion of the essay